

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/10/97

Date Received: 09/18/97

Project: Metro Self Monitor, PO# M58446

Date Samples Extracted: 10/09/97

Date Extracts Analyzed: 10/09/97

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005A**  
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M58446	0.67	1.1	0.60	0.28
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS FOR  
THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
(METHOD 6010)**

Laboratory Code: 710012-01 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.34	0.35	3	0-20
Copper	mg/L (ppm)	0.40	0.42	5	0-20
Nickel	mg/L (ppm)	0.40	0.45	12	0-20
Zinc	mg/L (ppm)	0.08	0.09	12a	0-20

Laboratory Code: 710012-01 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS	MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.34	94	98	80-120	4
Copper	mg/L (ppm)	5	0.40	94	98	80-120	4
Nickel	mg/L (ppm)	10	0.40	95	99	80-120	4
Zinc	mg/L (ppm)	5	0.08	96	101	80-120	5

Laboratory Code: LCS

Analyte:	Reporting Units	Spike Level	% Recovery		Acceptance Criteria	Relative Percent Difference
			MS	MSD		
Chromium	mg/L (ppm)	5	100	103	80-120	3
Copper	mg/L (ppm)	5	102	105	80-120	3
Nickel	mg/L (ppm)	10	101	104	80-120	3
Zinc	mg/L (ppm)	5	102	104	80-120	2

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

PJ # 759098

/ MK

## SAMPLE CHAIN OF CUSTODY

Anastasia - Copper Creek

Contact

Ronald - 1600

11/15/93

11/15/93

FAX #

Date 9/18/93

PROJECT NAME

PURCHASE ORDER

11/15/93

5588

PROJECT LOCATION

Soc. 100

SAMPLE DISPOSAL INFORMATION



Dispose after 30 days



Return Samples



Call for Instruction

Date/Time  
SampledType of  
Sample# of  
JarsLab  
Sample #Analyse  
Requested

AC 1

10/10/93

PRINT NAME

COMPANY

Date

Ronald Thompson

AC 1

9/18/93

Mike Kowanko

Fug B me

9/18/93

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Charlene Jensen, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

October 10, 1997

**INVOICE # 97ACU1010-2**  
**DUPLICATE COPY**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M58446: Results of testing requested by  
Gerry Thompson for material submitted on September 18, 1997.

1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due .....

\$ 65.00

FEDERAL TAX ID #(b) (6)

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October 10, 1997

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on September 18, 1997 from your Metro Self Monitor, PO# M58446 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson  
Chemist

keh  
Enclosures  
ACU1010R.DOC